

- 29 -

Claims

1. A wireless communication system (500) provides a number of communication resources for a plurality of mobile stations (512-516), wherein the wireless communication system employs a call gapping process and comprises a number of communication paths for routing a communication initiated by one of said plurality of mobile stations (512-516) to a destination node; the wireless communication system characterised in that one or more of said plurality of mobile stations (512-516) is configured to perform said call gapping process.
2. The wireless communication system (500) according to Claim 1, wherein said call gapping process employed by said one or more of said plurality of mobile stations (512-516) is performed prior to normal communication, to prevent a call that would likely be unsuccessful from being initiated and sent from said mobile station (512).
3. The wireless communication system according to Claim 2, wherein following a requested call being prevented from accessing the wireless communication system (500), an indication is provided to a user that the communication system is busy.
4. The wireless communication system (500) according to any preceding Claim, wherein said communication system (500) is further characterised by a communication device that determines when one or more address or destination node is overloaded, and in response to such a determination instructs a plurality of mobile stations to

- 30 -

initiate a self regulating call gapping process for said one or more address or destination node.

5. The wireless communication system (500) according to any preceding Claim, wherein said one or more of said plurality of mobile stations (512-516) is sent a wireless message containing one or more call gapping instruction, for example using a short message service.

10 6. The wireless communication system (500) according to Claim 5, wherein said one or more call gapping instruction comprises one or more of the following:
(i) One or more address of a destination node;
(ii) One or more telephone numbers;
15 (iii) One or more call blocking rate; and/or
(iv) A time-out value.

7. The wireless communication system (500) according to any preceding Claim, wherein said wireless
20 communication system (500) is a GSM or GPRS or UMTS system.

8. A communication unit (512, 536, 546) adapted to facilitate the wireless communication unit call gapping
25 operation in the wireless communication system of any of Claims 1 to 7.

9. The communication unit (536) according to Claim 8, wherein the communication unit is a base switching
30 site adapted to provide call gapping instructions to one or more of said plurality of mobile stations (512-516).

- 31 -

10. The communication unit (546) according to Claim 8, wherein the communication unit is an Operations and Management Centre (546) adapted to generate call gapping instructions to be routed to one or more of said
5 plurality of mobile stations (512-516).

11. The communication unit (512) according to Claim 8, wherein the communication unit is a mobile station (512) adapted to perform self-regulated call gapping
10 operations.

12. The communication unit (512, 522, 546) according to any of preceding Claims 8 to 11, wherein said communication unit (512, 522, 546) is configured to
15 operate on a GSM or GPRS or UMTS or IS-95 or CDMA2000 or a Personal computer employing voice over Internet Protocol.

13. A method of congestion relief in a wireless
20 communication system (700, 800, 900), the method comprising the step of:
invoking a call gapping mode of operation;
the method characterised by the step of:
performing (900) said call gapping process in a
25 wireless communication unit operating in said wireless communication system.

14. The method of congestion relief in a wireless communication system according to Claim 13, the method
30 further characterised by the step of:
indicating to a user that the communication system is busy following a requested call being prevented from accessing the wireless communication system (500).

- 32 -

15. The method of congestion relief in a wireless communication system according to Claim 13 or Claim 14, the method further characterised by the steps of:

- 5 determining when one or more address or destination node is overloaded; and
- instructing a plurality of mobile stations to initiate a self-regulating call gapping process for said one or more address or destination node, in response to
- 10 such a determination.

16. The method of congestion relief in a wireless communication system according to any of preceding Claims 13 to 15, the method further characterised by the step of

15 sending a wireless message to said one or more of said plurality of mobile stations, wherein said message contains one or more call gapping instructions.

17. The method of congestion relief in a wireless communication system according to any of preceding Claims 13 to 16, wherein said one or more call gapping instruction comprises one or more of the following:
- 20 (i) One or more address of a destination node;
- (ii) One or more telephone numbers;
- 25 (iii) One or more call blocking rate; and/or
- (iv) A time-out value.

18. A storage medium storing processor-implementable instructions for controlling a processor to carry out the

30 method steps of any of Claims 13 to 17.